Project Details (2006)

San Juan Resource, Conservation, and Development Council

Flood Hazards and Water Quality in the Upper Los Piños River Watershed

Summary of Work: The Upper Los Piños River Watershed project will address water quantity and quality problems in areas affected by the Missionary Ridge wildfire that impact Vallecito Reservoir.

Streams discharging from the wildfire area will be gaged using volunteer discharge measurements. Rainfall runoff from the burned area will be sampled for water-quality constituents (dissolved and total iron, manganese, and ammonia).

Sediments in streams draining the burned area will be sampled and analyzed for manganese and mercury. Rainfall data will be compiled from USGS rain gauges in the burned area. Results from the coupled rainfall-runoff study will help contribute to the emergency evacuation plan for the Vallecito Lake community and will contribute to the La Plata County planning and zoning maps.

Water-quality samples will be collected from Vallecito Reservoir. The project will include four phases:

1. Stream discharges from flood-prone areas.
2. Correlation of rainfall to stream discharges
3. Water-quality from flood-prone areas
4. Water quality of Vallecito Reservoir)

Roaring Fork Conservancy Watershed

Roaring Fork Watershed Stream Flow Survey Project Completion and Aquatic Condition Assessment

Summary of work: The completion of the Roaring Fork Watershed Stream Flow Survey Project requires flow alteration analysis using CWCB's Colorado Decision Support Systems Stream Simulation soon to be completed modeled daily and monthly data on baseflow and baseline conditions. These data and data on water quality, riparian and inchannel conditions will be georeferenced to the National Hydrography Dataset (NHD) providing the basis for assessing aquatic resource condition.

This begins the tasks needed to prioritize protection and restoration needs in the Roaring Fork Watershed. The Roaring Fork Conservancy is working with the Water Group of the Roaring Fork Watershed Collaborative to develop a watershed plan. Data on flow alteration is necessary for the water quantity chapter and the aquatic resource condition will be used in the chapter on

aquatic and riparian resources.

North Fork River Improvement Association

Chipeta Dam Removal

Summary of Work: The Chipeta Dam Removal Project's three main goals include:

1. **Restoration:** The restoration process will remove an obsolete dam and restore an important reach of river to functioning condition. The project will incorporate riffles, and pools providing habitat for insects, fish and other wildlife. Agricultural lands and private property adjacent and downstream of the site will be protected by creating a slow, meandering river channel and stabilizing banks to prevent erosion of banks downstream. Finally, water hogging, non-native riparian species will be removed and replaced with native riparian vegetation to shade and enhance habitat.
2. **Creating Safe Recreation:** Each year the Hotchkiss Fire Department is called to rescue boaters and swimmers who are trapped in this structure at high water. Removing the structure will eliminate these rescue calls and make the stretch from Hotchkiss to Paonia an enjoyable, safe recreational experience.
3. **Facilitate Fish Migration:** Currently the disintegrating structure blocks the entire channel, isolating populations of fish. The project will remove the barrier and create a graded drop with rocks and pools to enable fish migration and interbreeding between river reaches.

San Juan Resource, Conservation & Development Council (Animas River Nutrient Work Group)

Watershed Plan Development

Summary of Work: The San Juan Resource Conservation & Development Council includes the Animas River Nutrient Work Group. The Work Group has identified nutrients enrichment in the Animas Basin by sampling low water from 2003 – 2005. The grant focus is to expand the base of stakeholders and develop a geographic database. Both of these objectives are complete. The grant is also awarded to develop a draft watershed plan under EPA guidelines. The grantee has an extension because of project management staffing issues. Ecosphere Environmental Services is effectively managing the project as of Spring 2008.

Ecosphere Environmental Services currently has the contract to coordinate stakeholder meetings and maintains a subcontract agreement with BUGS Consulting (BUGS) to complete the watershed management plan. To date, BUGS has completed the watershed management plan through a draft of Section 2. Comments received at the September meeting will be incorporated for review during the October 15 meeting. The stakeholders have reviewed the strategy document. The revised completion date for the watershed plan has been extended to February 2010.

Grand County Water Information Network

Algae Monitoring Project

Summary of Work: The purpose of the Grand County Water Information Network (GCWIN) Algae Monitoring Project was to quantify the existing algae problem and potential health risks in Grand County through a watershed-specific approach. The primary algae and algae toxin concerns in the Three Lakes area are: 1) *drinking water concerns* due to the algal toxins; 2) *recreational concerns* due to the extensive use of the lakes for fishing, swimming, kayaking, water skiing, jet skiing, and sailing; and 3) *aquatic habitat and wildlife concerns*. The primary algae and algal toxin concerns in the Fraser River and Colorado River Basins are: 1) *drinking water concerns* due to taste and odor problems from the algae and potential algal toxins; 2) *water quality concerns regarding water used for agriculture, irrigation, and livestock purposes*: and 3) *aquatic habitat and wildlife concerns*. Empirical data were greatly needed to quantify the extent of alga colonies. Tracking and quantifying the increased alga growth in Grand County's lakes and rivers can be used to help decision-makers implement watershed improvement goals and objectives and improve in-situ water quality.

The CHRF grant goals were to 1) quantifying algal productivity (cell count by species); 2) a rapid analytical method to determine if toxin was present in drinking water resources; and 3) mapping the locations and concentrations of algae in Grand County. Algal productivity was quantified by cell count and monitored temporally and spatially. Staff anticipates a final report before the end of the year.